

### **Performance of concrete coatings under varying exposure conditions**

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**Abstract:** This paper reports the results of a study conducted to evaluate the performance of ten concrete coatings, representative of five generic types, under varying exposure conditions. The performance of selected coatings was assessed on laboratory specimens by testing their adhesion to concrete, crack-bridging ability, chloride permeability and resistance to moisture and thermal variations. The data indicate that the overall performance of epoxy resin and polyurethane coatings was better than that of other generic types of coatings depending on chemical formulations. Further, a variation in the performance of coatings of similar generic type was noted. The selected coating needs to be tested under conditions similar to the exposure environment. Guidelines for the selection of concrete coatings appropriate for the service conditions are presented along with the performance criteria.